**3-DIMENSIONAL POSITION RECOGNITION**

### ROBOT GUIDANCE
- Seam sealing
- Pane assembly
- Door assembly
- Cockpit assembly
- Opening of hoods etc.
- Wheel assembly
- Adhesive inspection
- Cleaning of functional surfaces
- Masking of window flanges

### OBJECT POSITION MEASUREMENT
- Add-on parts for raw vehicle bodies
- Panes in the window flange
- Gap width and flushness

![Opening the hood (robot wrist camera)](image)

The following end users already trust in VMT® solutions: Audi, BMW, DaimlerChrysler, FAW-VW, Ford, Magna Steyr, Mercedes Benz, Nedcar, Scania, Seat, Skoda, Smart, Volkswagen, Volvo and many others.

We closely work together with ABB, Dürr, EFTEC, Eisenmann, Fanuc Robotics, FTF, KUKA, Müller Weingarten, Nothelfer, Schuler, Siemens and many others.

![Visual coverage planning for different body types](image)

### YOUR BENEFITS
- Uniformly high manufacturing quality
- Fast and free of contact
- Faster change of production
- Flexible and economical
- Free of maintenance
- Very high efficiency
- Complete documentation of the production processes

![3D body position determination](image)
**PERFORMANCE FEATURES**

- Multistage visual sensing for optimum measurement speed and accuracy
- Setting up the system by specifying example images, setting numerical parameters is not necessary
- Calculation of absolute and relative object positions

![Flexible pane installation on painted vehicle bodies](image)

- Image processing tolerance to variable lighting, surface properties and background
- Extensive validation checks for reliable measurement results
- Specification of object-based tolerances is possible
- Complete logging of all system activities, internally and at the interfaces to the plant controller and to the robot
- Easily configurable communication protocols for all common industrial robots
- Inspection and monitoring tasks, type recognition and spray check is possible with the same system

![Production-capable cameras and lighting](image)

- Controlling of several robots with one system computer
- Referencing on the object is possible through several features: Holes, edges, corners, highlights, imprinting structures, etc.
- Measurement of several objects simultaneously with separately determined object positions for higher machining accuracy
- Measurement of the relative position of mounted parts on an object
- Certain calculation of measurement results despite the failure of a camera or a feature getting hidden
- Self-calibrating after camera replacement without any additional aids
- Option: Robot-based system calibration for an initial setting up without any additional measurement devices

**TECHNICAL FEATURES**

**Interfaces**
- Profibus, Interbus, serial, Ethernet, I/O

**Robots**
- KUKA, ABB, Fanuc, Reis, Comau, Mitsubishi and other robots also possible

**Camera installation**
- Stationary, robot wrist cameras or combinations

**VMT® IMAGE PROCESSING**

VMT provides individual turnkey systems and complete solutions for industrial image processing applications and automation. In order to control processes and guaranty perfect quality our systems are integrated in almost all industry trades. The highly qualified VMT engineer team has more than 200 man years of experience in industrial image processing. We maintain long lasting and successful relations to market and technology partners and their clients. More than 500 proven system installations speak for themselves. VMT system solutions are based on self developed software products adaptable to the clients’ specific needs, added with the appropriate machinery if desired. The systems responsibility stays with VMT. Due to own developments, cooperations with research centres and technology partners the guaranty of constant development of the systems and the used technologies is always given.